

PATENT CLAIMS

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1. ~~Frame construction (1) for a two-wheeled vehicle, comprising a movable and replaceable front wheel fork (107), rear chainstays (15) and therebetween further frame components, e.g. a saddle tube (18), a crank housing (25) and a lower tube (26) from crank housing to steering tube, characterized in that said rear chainstays (15) are equipped, at the rear end thereof, with a parallelogram-type suspension assembly (2) with adjustable spring stiffness.~~

2. ~~Frame construction (1) according to claim 1, characterized by chainstays (15) with a rear fastening piece (3) included in a suspension assembly (2) for a rear wheel (4), the suspension mechanism (2) furthermore comprising~~
- a rear part (5) for wheelholding and
- a movable midsection that comprises
- at least two substantially parallel bars (6, 7) of substantially equal length, pointing backwards and preferably slantingly downwards from respective bearings (22, 21) on the rear fastening piece (3), and
- wherein each of the bars (6, 7) is revolvably journaled in the respective bearings (22, 21) on the fastening piece (3), and furthermore in respective bearings (20, 19) on the rear wheelholding part (5), and
- a spring device (12) to create a spring force, pointing predominantly downwards towards the rear wheel (4) shaft, and
- a device (13) for power transmission from the frame construction to a wheeldriving detail (14), e.g. a cogwheel on the rear wheel.

3. ~~Frame construction according to claim 2, wherein the power transmission device is a chain (13) between a freewheel (16) made up of cogwheels on the rear fastening piece (3), and the rear wheel drive detail (14), which detail is a cogwheel.~~

4. Frame construction according to claim 3,
wherein one of the rear fastening piece bearings (21) is adapted to hold the
bicycle freewheel or cogwheels (16) for contact with main chain or pinion and
cardan.
5. Frame construction according to claim 2,
wherein said chainstays (15) extend to one side of the wheel (4) only.
6. Frame construction according to claim 2,
wherein said suspension assembly (2) comprises a linearly functioning spring
(12), at least one end of which has a landing device which can be displaced
transversely relative to the linear direction of the spring (12).
7. Frame construction according to claim 2,
wherein a cardan transmission (34, 35) of varying length transmits power to the
shaft cogwheels (14) of the bicycle.
8. Frame construction according to claim 2,
wherein a cardan (34, 35) transmits power to the freewheel (16) mounted to the
rear fastening piece (3).
9. Frame construction according to claim 2,
wherein at least one torsion spring has been mounted around one of the bearings
(19-22) or another place where the arms are subject to counterforces from e.g. the
insides of the bars (6, 7) or another counter-support mounted in a suitable place
and where the torsion spring arm (or arms) rests against a displaceable projection
on one or both bars (6, 7) operated by wire from e.g. the handlebars by use of a
lever.
10. Frame construction for a two-wheeled vehicle; said frame construction (1)
comprising rear chainstays (15) with a rear fastening piece (3) included in a
suspension mechanism (2) for a rear wheel (4),

characterized in that said suspension mechanism (2) furthermore encompasses

- a rear wheelholding part (5) to which the rear wheel (4) is fastened.
- a movable midsection comprising
 - at least two substantially parallel bars (6, 7) of predominantly equal lengths, pointing backwards and sloping downwards from respective bearings (22, 21) on the rear fastening piece (3), and
 - each bar (6, 7) being revolvably journalled to the respective bearings (22, 21) on the fastening piece (3) as well as in respective bearings (20, 19) on the rear fastening piece (5), and
- a spring device (12) for creating a spring force power pointing predominantly downwards towards the rear wheel (4) shaft, and
- a device for power transmission (13) from a driving detail (16) on the rear frame to a driving item (14) on the rear wheel (4).

11. Frame construction for a two-wheeled vehicle, said frame construction (1) comprising a movable and exchangeable front fork (107), rear chainstays (15) and, between these, further frame construction details, e.g. a saddle tube (18), a crank housing (25) and a lower pipe (26),

characterized in that at least one of said fork (107) and said chainstays (15) is one-sided.

12. Frame construction according to claim 11, characterized in that said chainstays (15) have a rear fastening piece (3) included in a suspension mechanism (2) for a rear wheel (4).

13. Front fork assembly for a two-wheeled vehicle, said assembly comprising a suspension mechanism (101, 102, 103) with the structure of a parallelogram, characterized in that the assembly comprises only one fork leg (107).

14. ~~Front fork assembly according to claim 13, characterized in that it comprises front wheel bearing and a disc brake device (17) on the lower end of the fork leg, whereby a front wheel (104) can be snapped on to the front wheel bearing from the side without a fork leg.~~

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15. ~~Front fork assembly according to claim 13, characterized in that it is arranged for mounting on a standard bicycle frame steering tube (16), said assembly comprising a fastening piece (105) for attachment to the steering tube (16) with revolvable bearings in upper and lower ends of the steering tube, from which fastening piece (105) a section (111) for fastening of the suspension mechanism (101, 102, 112) and fork leg (107) points downwards, and further two mainly parallel, slantingly downwards- and backwardspointing bars (101, 102) each journalled in both ends, as the upper ends of the bars have been mounted revolvably to the fastening pieces (105) and the lower ends of the bars to a fork leg holding piece (103) on the upper end of the fork leg (107).~~

16. ~~Front fork assembly according to claim 13, characterized by being arranged for mounting on a standard frame steering tube (116), said assembly comprising a fastening piece to be fastened to the steering tube (116) with revolvable bearings in the steering tube upper and lower ends, from which fastening piece (105) the fork leg (107) points downwards, said fork leg having at its lower end an out-tapering part (121) to which two bearing pins (122, 119) are fastened for journalling of the ends of two parallelogram bars (101, 102), the opposite ends of which are journalled to two bearing pins (124, 104) on a wheelholding device (123) mounted to carry the front wheel hub.~~

17. ~~Front fork assembly according to claim 15 or 16, characterized in that the suspension mechanism comprises the bars (101, 102) and a spring device (106, 108, 110, 112) with a system (106, 108, 110) for controllable setting of the magnitude of the spring stiffness.~~

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